

Notice of Allowability

Application No.

10/759,466

Examiner

Thanh-Ha Dang

Applicant(s)

MAZZAGATTI ET AL.

Art Unit

2163

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 08/13/07.
2. ☒ The allowed claim(s) is/are 1-11, 14 and 18-21 that are renumbered as 1-16.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date 09/10/2007
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 102507
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


WILSON LEE
PRIMARY EXAMINER

DETAILED ACTION

Response to Amendment

1. Receipt of Applicant's Amendment filed 08/13/07 is acknowledged.

EXAMINER'S AMENDMENT

2. Authorization for this examiner's amendment was given in a telephone interview with Mr. Richard J. Gregson (RN 41,804) on 10/19/07.

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

(CURRENTLY AMENDED) 1. A method of saving an interlocking trees data store from memory to permanent storage comprising the steps of:

traversing the interlocking trees data store to access each node_i

creating a node packet containing all information relevant to the node_i

and

writing the node packet to permanent storage;

wherein,

the interlocking trees datastore structure comprising elemental root nodes, subcomponent nodes and end-product nodes using asCase and asResult bi-directional links used in determining paths within the interlocking trees datastore structure;

the asCase bi-directional link represents a pointer to a first of two nodes from which a particular node is created; and

the asResult bi-directional link represents a pointer to a second of two nodes from which the particular node is created.

(CURRENTLY AMENDED) 2. The method of according to claim 1, wherein said saving of an interlocking trees data store from memory to permanent storage further comprises the step of:

saving supporting structures to permanent storage.

(ORIGINAL) 3. The method of according to claim 2, wherein the step of saving supporting structures comprises saving any of the following list of structures needed to restore the interlocking trees data store to memory, wherein said list includes:

KStore name, creation date, version 1 or cycle of Save program that created the save file, OS operating system underlying structure information including at least size of fields used information, sign structure information ~~if not~~

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~~saved below~~, elemental root nodes ~~or~~ and elemental root node values and pointers to the elemental root nodes' levels and associated delimiters;

meta data including one or more of the following field types:

user defined types, column descriptions, and permissions; ;

kState variables including one or more of the following:

switches, data streams, and sign structure information for instance special ordering ~~for~~ of asCase bi-directional links in asCase lists;

data sources including one or more of the following:

types, locations, affiliated data streams } for learning new knowledge security including one or more of the following:

administrator passwords, user passwords, permissions, saved query locations, and triggers; ; and

XML-related meta data, ~~if any~~.

(CURRENTLY AMENDED) 4. A The method ~~of saving an interlocking trees data store from memory to permanent storage~~ according to claim 2, wherein saving supporting structures comprises the steps of:

determining ~~which~~ informational structures will to be saved with the interlocking trees data store; ; and,

formatting and writing said informational structures to permanent storage.

(CURRENTLY AMENDED) 5. A ~~The method of saving an interlocking trees data store from memory to permanent storage according to claim 1, wherein creating a node packet containing all information relevant to the node, comprises the steps of:~~

storing the node's current load address in the packet;

storing the asCase and asResult bi-directional links pointers, any other additional fields, ~~the~~ an asCase list of pointers and ~~the~~ an asResult list of pointers in the packet; and

writing the node packet to permanent storage.

(CURRENTLY AMENDED) 6. The method of according to claim 5, wherein prior to storing any packets, memory is allocated for each packet to be stored.

(CURRENTLY AMENDED) 7. A ~~The method of saving an interlocking trees data store from memory to permanent storage according to claim 1, wherein traversing the interlocking trees data store to access each node comprises the steps of:~~

traversing the interlocking trees data store to access each node starting from the primary root, using a typical tree traversal along the asCase paths comprising a set of asCase links connecting nodes.

(CURRENTLY AMENDED) 8. A ~~The method of saving an interlocking trees data store from memory to permanent storage~~ according to claim 1, wherein traversing the interlocking trees data store to access each node comprises the steps of:

traversing the interlocking trees data store to access each node beginning from an end product nodes,

(CURRENTLY AMENDED) 9. The method of according to claim 8, wherein said traversing beginning from end product nodes begins after obtaining access to all end product nodes from a file of end product node information associated with said interlocking trees datastore.

(CURRENTLY AMENDED) 10. A ~~The method of saving an interlocking trees data store from memory to permanent storage~~ according to claim 1, wherein traversing the interlocking trees data store to access each node comprises the steps of:

traversing the interlocking trees data store to access each node from a
root node nodes.

(CURRENTLY AMENDED) 11. The method of according to claim 10, wherein
said traversing beginning from said root nodes begins after obtaining access to
all root nodes from a file of root node information associated with said
interlocking trees datastore.

12. CANCELED.

13. CANCELED.

(CURRENTLY AMENDED) 14. A computer readable storage media containing
encoded data comprising a set of instructions executable on a computing system
which when executed configure said system to provide the facility to save and
restore a trees based datastore, said set of instructions comprising:

a save set having;

a first set to traverse the interlocking trees data store to access
each node to be saved;_i

a second set to create a node packet containing all information
relevant to the node to be saved;_i and

a third set to write the node to be saved as a packet created by the
second set to permanent storage connected to said computing system;_i

wherein,

the interlocking trees datastore structure comprising elemental root nodes, subcomponent nodes and end-product nodes using asCase and asResult bi-directional links used in determining paths within the interlocking trees datastore structure;

the asCase bi-directional link represents a pointer to a first of two nodes from which a particular node is created; and

the asResult bi-directional link represents a pointer to a second of two nodes from which the particular node is created.

15. CANCELED.

16. CANCELED.

17. CANCELED.

(CURRENTLY AMENDED) 18. A computer system having an interlocking trees datastore in a memory of said computer system and having a saving means for saving said interlocking trees datastore for later restoration, said saving means comprising:

means for locating and saving all relevant header information including metadata relevant to restoring said interlocking trees data store,

means for locating each node in said interlocking trees data store and

means for saving all data about each located node in a packet form;

wherein,

the interlocking trees datastore comprising elemental root nodes, subcomponent nodes and end-product nodes using asCase and asResult bi-directional links used in determining paths within the interlocking trees datastore structure;

the asCase bi-directional link represents a pointer to a first of two nodes from which a particular node is created; and

the asResult bi-directional link represents a pointer to a second of two nodes from which the particular node is created.

(CURRENTLY AMENDED) 19. The computer system of according to claim 18, wherein said means for saving all data determines ~~discovers~~ a saved size for said packet form of said all data about each located node.

(CURRENTLY AMENDED) 20. The computer system of according to claim 19, wherein a total size of a saved interlocking trees datastore saved by said saving means is a function of said saved size for each said packet.

(CURRENTLY AMENDED) 21. The computer system of according to claim 18, wherein said each packet contains pointer data pointing to addresses of other nodes of said interlocking trees data store that had been linked to the node from which said each packet is constructed in said means for saving.

Allowable Subject Matter

3. Claims 1-11, 14 and 18-21 that are renumbered as 1-16 are allowed.

The following is an examiner's statement of reasons for allowance: Claims 1-11, 14 and 18-21 are allowable because the prior art made of record does not teach or fairly suggest the combination of elements as recited in independent Claims 1, 14 and 18.

Specifically, the prior art of record does not teach:

- wherein, the interlocking trees datastore comprising elemental root nodes, subcomponent nodes and end-product nodes using asCase and asResult bi-directional links used in determining paths within the interlocking trees datastore structure; the asCase bi-directional link represents a pointer to a first of two nodes from which a particular node is created; and the asResult bi-directional link represents a pointer to a second of two nodes from which the particular node is created taken with the other limitations as recited in Claim 1.
- wherein, the interlocking trees datastore comprising elemental root nodes, subcomponent nodes and end-product nodes using asCase and asResult bi-directional links used in determining paths within the interlocking trees datastore structure; the asCase bi-directional link represents a pointer to a first of two nodes from which a particular node is created; and the asResult bi-directional link represents a pointer to a second of two nodes from which

the particular node is created taken with the other limitations as recited in Claim 14.

- wherein, the interlocking trees datastore comprising elemental root nodes, subcomponent nodes and end-product nodes using asCase and asResult bi-directional links used in determining paths within the interlocking trees datastore structure; the asCase bi-directional link represents a pointer to a first of two nodes from which a particular node is created; and the asResult bi-directional link represents a pointer to a second of two nodes from which the particular node is created taken with the other limitations as recited in Claim 18.

The dependent claims being definite, further limiting and fully enabled by the Specification are also allowed.

These features, together with the other limitations of the independent claims are novel and non-obvious over the prior art of record.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh-Ha Dang whose telephone number is 571-272-4033. The examiner can normally be reached on Monday-Friday from 9:00 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571-272-1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thanh-Ha Dang
Examiner, AU 2163

October 25, 2007



WILSON LEE
PRIMARY EXAMINER